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GEOLOGY:—*Review of Dr. Günther Schlesinger's paper on Mastodons.* OLIVER P. HAY. Carnegie Institution of Washington.

In a paper published[1] in 1912 Dr. Günther Schlesinger presented a classification of the mastodons, proceeding on the theory that they all belonged to one genus, but that subgenera were indicated. He expressed his indebtedness to a friend for instruction in the laws of nomenclature and of priority; and this instruction led him to adopt for all mastodons Cope's generic name *Tetrabelodon*. It rendered him also competent to join in a protest[2] against the strict application of the law of priority. Inasmuch as in that paper under his subgeneric names, Schlesinger cited species only as examples, not choosing types, consideration of these subgenera will be passed.

In his recently published[3] essay Schlesinger presents a similar scheme of classification, but with some changes. He disavows his former choice of *Tetrabelodon* on the ground that its use was not, after all, in accordance with the rules of nomenclature, and he now places the generic primacy on *Mastodon*. He also selected a type species for each of his subgenera.

In choosing *Mastodon* as the generic name Schlesinger grants that there is no valid reason why *Mammut* should not be employed; but he rejects it on the ground that, being used in German literature as a name for the Siberian elephant, confusion would result. For the same reason, one may think, our modern Greek zoologists and paleontologists might object to the use of *Hipparion* for a three-toed horse, whereas they apply it to the existing one-toed equine; also to the use of *Corydalus* for a neuropterus insect, whereas it is the modern Greek word for the sky-lark.

[1] Jahrb. geolog. Reichsanst. Wien, **62**: 135.
[2] Ziegler, Zool. Anz., **33**: 268.
[3] Denkschr. naturh. Staatsmus., **1**: 1. 1921.

*Mammut*, however, is not wholly shorn of authority. It is simply required to take a less conspicuous seat and is there permitted to preside over *Mastodon americanus* and its near kin. Being retained in a somewhat obscure position, it is less likely to be mistaken for an elephant. *Tetrabelodon* likewise has suffered a reduction in rank and now represents only *Mastodon pygmaeus* Depéret. Inasmuch as *M. pygmaeus* had not been heard of by Cope when he established *Tetrabelodon*, much less included under the name, it cannot be made the type of this genus. Besides, Cope expressly stated that the type of *Tetrabelodon* is *T. angustidens*.

It may be well to point out here again, as the writer has already done,[4] that the oldest generic name for *angustidens*, if withdrawn from *Mastodon*, is *Gomphotherium;* that the oldest specific name is *leptodon;*[5] and that hence the species is properly to be known as *Gomphotherium leptodon* Fischer de Waldheim; and the name will, in this paper, be used for the species. In Schlesinger's scheme this species is recognized as the type of Vacek's genus *Bunolophodon*. Already, in 1918, Dr. W. D. Matthew[6] had made *angustidens* the lectotype of this genus; a lucky stroke, inasmuch as *Bunolophodon* became thereby a synonym of *Tetrabelodon*, therefore of *Gomphotherium*, and hence apparently permanently side-tracked.

For *Mastodon arvernensis* Dr. Schlesinger proposes a new subgenus *Dibunodon*. This appears superfluous, however, inasmuch as *Anancus* presents claims for the honor. This name was first used in 1854 by Aymard[7] for a mastodon called *Anancus macroplus*, but there was no description, and the name was a dead letter. The writer has recently explained[8] the status of this name. Suffice it to say that if *Mastodon arvernensis* requires a generic or subgeneric name *Anancus* must be used, credited to Lartet, 1859. Moreover, it must include all other mastodons not withdrawn on valid generic characters.

For the type of Cope's genus *Dibelodon* Schlesinger proposes *Mastodon humboldtii*, but Cope at the time of establishing this genus made Leidy's *M. shepardi* the type. Unless it can be shown that this species is a synonym of *M. humboldtii*, which would appear to be a task beset with difficulties, Schlesinger's proposal will hardly be

[4] Pan-Amer. Geol. **39**: 109. 1923.
[5] Op. cit., p. 112.
[6] Bull. Amer. Mus. Nat. Hist. **38**: 200. 1918.
[7] Ann. Soc. Agric. Sci. du Puy, **19**: 597. 1854.
[8] Proc. U. S. Nat. Mus., vol. 66, art. 35, p. 4, 1925.

accepted by people who have any regard for established rules of nomenclature. The genus *Dibelodon* was based on a tusk and a tooth, but nobody can at present be certain that these belonged to the same species or even genus, and the probability appears[9] to be that there were long tusks in the lower jaw. This, however, does not necessarily put the species in the genus *Gomphotherium*, as was wrongly concluded by the present writer on the page quoted.

Schlesinger's use of *Mastodon tapiroides* as a type of *Zygolophodon* appears to be legitimate. It seems to have been selected by Matthew[10] in 1918. Schlesinger makes *Mastodon pentelici* the type of his *Choerolophodon*. The animal appears really to belong to a distinct genus, not so much on account of its teeth, perhaps, as of its remarkable skull.

Without any desire to question Dr. Schlesinger's knowledge of proboscideans, it seems necessary to say that that author has no proper conception of the significance of a genotype. When once properly chosen and announced, it should be inseparably joined to its genus, but the writer here reviewed evidently regards it as possible to detach that species and attach it as type to any other genus that may suit his wishes. If he does not so regard a genotype, how can he make *pygmaeus* the type of *Tetrabelodon* when Cope said Cuvier's *angustidens* was to be taken as the type? Practices of this kind tend to produce confusion in biological nomenclature.

In pursuing his theme Dr. Schlesinger pays his respects to some of the primitive mastodons of America. One finds it difficult to determine what he has in mind when he writes about *Mastodon shepardi*. When he mentions *M. obscurus* he evidently refers to the tooth described by Leidy from California, first as *M. shepardi*, later as *M. obscurus*. These are different species, one found on the eastern border of the continent; the other, on the western. He likewise makes the mistake of attributing Cope's type of *M. productum* (= *Gomphotherium productum*) to Mexico, instead of New Mexico.

It might be regarded as improbable that, starting at any point between France and New Mexico, any species of proboscidean would not in its journey to the two countries undergo specific modifications. Among living mammals it is rare to find the same species in southern Europe and the southern United States. Schlesinger finds it other-

[9] Hay, O. P., Pan-Amer. Geol., **39**: 111. 1923.
[10] Bull. Amer. Mus. Nat. Hist., **38**: 200. 1918.

wise. He assures us that he cannot distinguish Cope's *Gomphotherium productum* from *G. leptodon "forma typica,"* and that Leidy's *M. obscurus* represents *"forma subtapiroidea."*

Dr. Schlesinger discovers much to complain of in Cope's description of *G. productum*. He finds fault with Cope's expression regarding the cross-section of the tusk. Cope quoted Falconer's statement that the symphyseal tusks of *Gomphotherium leptodon* frequently have a channel on the superior and inner sides and then he wrote: "In *M. productus* the tusk is without channel." Schlesinger says that this is an error of Cope's; but he himself is wrong in that he supposes that Cope referred to the fine longitudinal channeling which the ivory shows when the smooth outer layer is removed. Cope, however, had in mind the broad shallow channel or groove which is present on the upper surface of the lower tusk of *Gomphotherium leptodon*. If Schlesinger's section is compared with that figured by Cope[11] it will be seen that he was correct and that the tusks described by him are quite different in section from those figured by Schlesinger. That Cope observed what Schlesinger calls "kannelierung" is shown by Cope's statement: "The dentine is longitudinally, weakly, closely striate. It is usually covered by a thin layer of cementum."

Schlesinger questions Cope's statement that the symphysis of his *G. productum* was shorter than that of *G. leptodon*. In Cope's figure,[12] as noted by Schlesinger, it is seen that a part of the bone is restored in plaster, and Schlesinger concludes that the jaw has been wrongly restored and was originally much longer. But Schlesinger could not see whether there was natural contact between the two parts on the lower side or in the interior. Why, then, his confident conclusion? As a matter of fact, the present writer finds nowhere actual contact superficially between the proximal and the distal halves of the symphysis. What is hidden beneath the surface is unknown. Nevertheless, the conformation of the parts indicates that no important gap was closed up. The concave and the convex surfaces of the basal portion of the symphysis pass in a natural way into the corresponding surfaces of the anterior part. At least, nobody has the right to say positively that the symphysis has, in the middle of the length, been artificially shortened. Furthermore, if Schlesinger means to say that the front end of the symphysis as figured by Cope is not the natural termination, he is wholly mistaken. The bone ends as represented. Schlesinger likewise attacks the position of the two lower tusks of Cope's specimen and states that these must have been, in life, closely

[11] Wheeler, U. S. Geogr. Sur. west 100th merid., vol. VI, pl. LXX, fig. 3.
[12] Op. cit., pl. LXX, figs. 1–3.

applied, one against the other, as they are in *G. leptodon;* whereas in the restoration they stand apart about 15 mm. This is another error. The two teeth are separated by 12 mm. of bone thoroughly fossilized and never disturbed, and the symphysis has its natural width, 120 mm. Again, there is nothing either in the description or in the restoration of the specimen to indicate that Cope did not know that the lower incisors extend far back into the jaw. When he fitted the two parts of the symphysis together he could not help seeing this. Besides, on his page 307, Cope speaks of the longitudinal concavity on the underside of the beak "which occupies the space between the alveolar ridges of the enclosed tusks."

In the U. S. National Museum is the lower jaw which Leidy described[13] in 1873. In this jaw are both lower tusks, and these have exactly the same oval section as those of Cope's type. Cope was aware of Leidy's specimen and the description, and knew, therefore, that the tusks extended backward to near the hinder end of the symphysis. One tusk is exposed nearly its whole length. It must be said further that throughout their length these tusks are separated by a septum of bone 14 mm. thick.

That the symphyseal portion of the jaw of *G. productum* is not the same as in *G. leptodon* is shown by the proportions of the parts. In *G. leptodon* the anterior mental foramen is placed much farther forward than in *G. productum*, as shown both in Cope's and Leidy's specimens. According to Schlesinger's restoration of the lower jaw of *G. leptodon*, the greatest width near the distal end is only 0.265 of the distance from the distal end to the anterior mental foramen; in Cope's type the corresponding value is very close to 0.5; in the symphysis described and figured by Leidy the value is close to 0.4. A computation based on Leidy's specimen shows that Cope's type was not shortened more than 25 or 30 mm., if at all. The difference may be due to individual or sexual variation. In other respects the symphyseal portion of the jaw of *Gomphotherium productum* is quite different from that of *G. leptodon*. In the latter, this part is relatively long, slender, constricted in the middle of the length, and spatulate at the distal end. In *G. productum* the part is broader in proportion to the length and its right and left borders are nearly parallel. In *G. leptodon* the length of the tooth row, $M_1$–$M_3$ following Schlesinger's restoration, is two-thirds the length of the symphysis. The tooth row of Cope's type, $M_2$–$M_3$, lacks little of equalling the symphyseal length of Leidy's specimen, and it is to be remembered that this

[13] Extinct Vert. Fauna West. Terrs., p. 235, pl. XXII, figs. 1–4.

belonged to a larger animal. In the type the beak-like lower jaw is much more bent downward than it is in *G. leptodon*. Cope gives the amount of deflection as 35°. This seems to be measured in the upper border of the beak.

Dr. Schlesinger tells us that the teeth of Cope's type of *G. productum* are indistinguishable from those of *G. leptodon "forma typica."* To the present writer they appear distinctly different. At hand is a fine specimen of the lower left hinder molar of *G. leptodon* sent from southern France by Lartet. It is in nearly the same stage of wear as the corresponding tooth of Cope's type. The two teeth have the following dimensions:

TABLE 1.—MEASUREMENTS OF THIRD LOWER MOLARS IN MILLIMETERS

| | G. LEPTODON | G. PRODUCTUM |
|---|---|---|
| Length | 157 | 158 |
| Width at second crest | 68 | 75 |
| Height of first posttrite cone | 50 | 75 |
| Height of second posttrite cone | 50 | 65 |
| Height of third posttrite cone | 53 | 55 |
| Height of fourth posttrite cone | 38 | 45 |

In these measurements allowances are made as carefully as possible for loss by wear and injury. The height of the cones is measured perpendicularly to the base of the crown, not along the slopes.

The lower third molar of *G. leptodon* is narrow and has relatively low crests and the first three are of nearly the same height. In *G. productum* the tooth is broad and has high crests which diminish in height from the first to the last, as shown by figure 3 on Cope's plate LXXI. In *G. leptodon* the principal cones, especially the outer ones, are columnar and broadly rounded at the summits; in *G. productum* they are conical and their summits are narrow. In the specimen of *G. leptodon* at hand the second lower molar lacks its front crest. Its width at the third crest is 60 mm. In *G. productum* this molar is 102 mm. long, 75 mm. wide at the rear, and 60 mm. in front. The teeth of *G. productum* had reached a higher stage of development than those of *G. leptodon*.

Dr. Schlesinger is no doubt correct in his identification of the upper teeth figured[14] by Cope. They are the third and fourth premolars and the first and second molars.

On his page 53, Schlesinger mentions the lower tusk illustrated by Cope by his figures 8 and 8*a*; and Schlesinger regards this tusk as

[14] Wheeler, U. S. Geogr. Sur. west 100th merid., pl. LXXI, figs. 1, 2.

demonstrating his view that Cope's species is identical with *G. leptodon*. That might be the case if he could be sure that the tusk belonged to the same species as Cope's type. The writer believes that it belonged to another species. The fragment is 220 mm. long. How much of the distal end is missing cannot be determined; it may be that it was but little longer or twice as long. The proximal end has the pulp cavity filled with sandstone. The greater diameter is 56 mm.; the shorter, 39 mm. Its section, as shown by Cope's figure, is wholly different from that of the tusk of Cope's type and from that of the symphysis figured by Leidy. On both the upper and lower faces there is a broad shallow groove or channel. It belonged to an animal evidently larger than *G. productum* and possibly one having a shorter jaw.

Dr. Schlesinger, on his pages 51 and 228, identified the tooth described by Leidy from California under the name *Mastodon obscurus* as identical with Schlesinger's "*forma subtapiroidea*." When the cast of that lower tooth, if lower it is, is placed alongside of the subtapiroid lower teeth of Schlesinger's plate VIII very distinct differences are observed. When the cast is compared with upper teeth of Schlesinger's subtapiroid form (his pl. IV, fig. 2; pl. VII, fig. 3) there is still less agreement, although the common possession of a pretrite cingulum is shown.

On his page 36, Dr. Schlesinger noted the fact that Gaudry had described a species, *Mastodon pyrenaicus*, (now regarded as a synonym of *G. leptodon*) which presented characters resembling those of *M. tapiroides*. Schlesinger concluded that this form *pyrenaicus* is probably a synonym of his *subtapiroideus*, in case the tusks should not exclude its union with *G. leptodon*. A remark or two are suggested. In nomenclatural parlance *subtapiroideus* would be a synonym of *pyrenaicus* not *vice versa*. Why should Schlesinger burden the literature with his new name before he had determined that the two forms are different? Why did he not give to Cope's *proavus* and Leidy's *obscurus* the benefit of the qualifying phrase which he used in referring to *pyrenaicus*?

In maintaining these objections to Schlesinger's views the writer does not deny that the animals in question are closely related, that *G. productum* may have descended from *G. leptodon;* but he believes that the first constitutes a form sufficiently different to be regarded as a species. As long as it is not demonstrated that the two are identical he does not see what is to be gained by insisting that they are identical. Cope's ideas regarding species may have been narrow, but possibly Schlesinger's may be thought by some to be somewhat too broad.

ENTOMOLOGY.—*Some generic transfers and synonymy in Ichneumonidae.* (*Hym.*) R. A. CUSHMAN, Bureau of Entomology. (Communicated by S. A. ROHWER.)

The following notes are brought together and published at this time to make the new combinations and synonymy available for use in the forthcoming list of New York insects. Accepted names are in bold face type and synonyms in italics. In generic transfers the original genus is printed in Roman type and inclosed in parentheses.

(Ichneumon) **Trogomorpha ferrugator** (Fabricius) = *Trogomorpha trogiformis* (Cresson).

**Amblyteles annulipes** (Cresson) ♀ = *Amblyteles scitulus* (Cresson) ♂.

This synonymy is based on a gynandromorph in which the thorax, body and left legs are female and the head and right legs male. This specimen is in the National Museum collection.

(Ichneumon) **Amblyteles ater** (Cresson).

(Ichneumon) **Amblyteles aterrimus** (Provancher).

(Ichneumon) **Amblyteles atrox** (Cresson).

(Ichneumon) **Amblyteles bimembris** (Provancher).

**Amblyteles cincticornis** (Cresson) ♀ = *Ichneumon galenus* Cresson ♂.

(Ichneumon) **Amblyteles citimus** (Cresson).

(Ichneumon) **Amblyteles corvinus** (Cresson).

(Ichneumon) **Amblyteles creperus** (Cresson).

(Ichneumon) **Amblyteles funestus** (Cresson).

(Ichneumon) **Amblyteles fuscifrons** (Cresson).

(Ichneumon) **Amblyteles humillimus** (Dalla Torre).

(Ichneumon) **Amblyteles inconstans** (Cresson).

**Amblyteles jucundus** (Brulle) ♀ = *Amblyteles flavizonatus* (Cresson) ♂.

The synonymy of these two species is based on a mated pair captured by Dwight Isely at North East, Pa., on July 7, 1915; and also on one specimen of each sex reared by H. Bird from pupae of *Papaipema circumlucens* Illiger at Chicago, Ill. There are two males in the National Museum with the abdominal color pattern of the female.

(Ichneumon) **Amblyteles lachrymans** (Provancher).

(Ichneumon) **Amblyteles leucaniae** (Fitch) = *Amblyteles seminiger* (Cresson).

(Cryptus) **Amblyteles mellicoxus** (Provancher).

The transfer of this species to *Amblyteles* is based on a homotype (Rohwer) in the National Museum collection.

(Ichneumon) **Amblyteles mellipes** (Provancher).

**Amblyteles nanodes,** new name, = *Ichneumon nanus* Cresson (1877), not Ratzeburg (1848).

(Ichneumon) **Amblyteles pervagus** (Cresson).

(Ichneumon) **Amblyteles pilosulus** (Provancher).

**Amblyteles provancheri,** new name, = *Ichneumon bifasciatus* Provancher (1875) not Fourcroy (1785) nor Say (1828).

(Ichneumon) **Amblyteles proximus** (Cresson).

(Ichneumon) **Amblyteles pullatus** (Cresson) = *Ichneumon subcyaneus* Cresson.

The former name has page precedence.

(Ichneumon) **Amblyteles putus** (Cresson).

(Ichneumon) **Amblyteles restrictus** (Cresson).

(Ichneumon) **Amblyteles rubicundus** (Cresson).

(Ichneumon) **Amblyteles scelestus** (Cresson).

(Ichneumon) **Amblyteles scriptifrons** (Cresson).

(Ichneumon) **Amblyteles solitus** (Cresson).

(Ichneumon) **Amblyteles stygicus** (Provancher).

**Amblyteles sublatus** (Cresson) ♂ = *Ichneumon pravus* Cresson ♀.

This synonymy is based on a series of seven specimens, including both sexes, reared under Gipsy Moth Laboratory No. 10092 E 19 from pupae of *Hemerocampa guttivitta* Walker at Tamworth, N. H. These are in the National Museum. There are also in the collection two specimens, one of each sex, reared from the same host at the Maine Experiment Station.

(Ichneumon) **Amblyteles trunculentus** (Cresson).

(Ichneumon) **Amblyteles ultimus** (Cresson).

(Ichneumon) **Amblyteles uncinatus** (Cresson).

(Ichneumon) **Amblyteles vescus** (Cresson).

(Ichneumon) **Amblyteles vitalis** (Cresson).

(Ichneumon) **Amblyteles vittifrons** (Cresson).

(Ichneumon) **Amblyteles vivax** (Cresson).

(Ichneumon) **Amblyteles volesus** (Cresson).

(Phygadeuon) **Glyphicnemis crassipes** (Provancher).

(Phygadeuon) **Stylocryptus maculatus** (Provancher).

(Phygadeuon) **Stylocryptus vulgaris** (Cresson).

(Cryptus) **Plectocryptus contiguus** (Cresson).

(Phygadeuon) **Plectocryptus major** (Cresson).

The sexual antigeny of the above two species is very great, but I suspect they are the sexes of the same species.

(Phygadeuon) **Chromocryptus planosae** (Fitch) = *Chromocryptus nebraskensis* (Ashmead).

The types of both names are in the National Museum collection.

### Tribe **Cryptini.**

CRYPTINI, Tribe V, Ashmead, Smith's Insects of N. J., 1899 edition, p. 570. 1900.

MESOSTENINI, Tribe VI, Ashmead, loc. cit.

The tribe Mesostenini is separated from the Cryptini entirely on the size and form of the alar areolet. There is no sharp division between the two tribes on this character, as becomes more evident when the tropical forms of the group are studied. I therefore consider them as the single tribe Cryptini.

(Cryptus) **Chaeretymma lata** (Provancher) = *Phygadeuon occidentalis* Provancher.

S. A. Rohwer examined the types of *latus* and *occidentalis* and was of the opinion that they are synonymous. He brought back to the National Museum a homotype of *occidentalis*, and it is on the basis of this specimen that I transfer the species to *Chaeretymma*.

(Cryptus) **Chaeretymma velox** (Cresson).

(Cryptus) **Compsocryptus retentor** (Brullé).

(Cryptus) **Spilocryptus atricollaris** (Walsh).

A female specimen from Illinois in the National Museum with the name label in Walsh's handwriting is hereby designated as the neotype.

**Spilocryptus extrematis** (Cresson) = *Cryptus imitator* Provancher.

(Cryptus) **Hoplocryptus apicatus** (Provancher).

**Hoplocryptus incertulus,** new name = *Cryptus incertus* Cresson (1869) not Ratzeburg (1852).

In Dalla Torre's "Catalogus Hymenopterorum" *Cryptus incertus* Cresson is synonymized with *Phygadeuon latus* (Provancher). Viereck, recognizing it as Cryptine rather than Phygadeuonine and as distinct from *latus* Provancher, has written the name in Dalla Torre under *Cryptus* and opposite it has written" = *Itamoplex incertulus* Vier., n. n." But I have been unable to find any publication of this name.

(Cryptus) **Idiolispa limata** (Cresson).

## Genus **Trychosis** Foerster.

*Idiolispa* Foertser, Verh. Nat. Ver. Preuss. Rheinl. **25:** 188. 1868.
*Ethaemorpha* Viereck, Proc. U. S. Nat. Mus. **44:** 565. 1913.

The types of these two genera are, in my opinion, entirely congeneric.

(Cryptus) **Trychosis rufoannulata** (Provancher).

(Ethaemorpha) **Trychosis similis** (Cresson).

## Genus **Cryptus** Fabricius.

*Itamoplex* Foerster, Verh. Nat. Ver. Preuss. Rheinl. **25:** 188. 1868.

There seems to be no reason to doubt the propriety of referring (*Cryptus americanus* Cresson) = *Itamoplex vinctus* (Say) to *Itamoplex*. This species is entirely congeneric with *Cryptus viduatorius* Fabricius, genotype of *Cryptus*. If, however, the Erlangen list is to be recognized, *Itamoplex* will have to be used in place of *Cryptus*.

**Cryptus persimilis** Cresson is a typical *Cryptus*.

(Itamoplex) **Cryptus vinctus** (Say) = *Cryptus purneri* Dalla Torre = *Cryptus nigricornis* Provancher.

(Mesostenus) **Crypturopsis candidus** (Cresson) = *Crypturopsis albomaculatus* (Ashmead).

(Mesostenus) **Crypturopsis fortis** (Cresson).

## Genus **Listrognathus** Tschek.

*Listrognathus* Tschek., Verh. Zool.-bot. Ges., Wien., **20:** 153. 1870.
*Mesostenoidens* Ashmead, Proc. U. S. Nat. Mus., **23:** 45. 1900.

Viereck has synonymized *Mesostenoideus* with *Polycyrtus* Spinola. In this he is in error, for the only character mentioned by Spinola in his description of *Polycyrtus* that is shared by *Mesostenoideus albomaculatus* (Cresson) is the frontal horn; while it differs markedly in its opaque and densely punctate integument and short and weakly impressed notauli. It is, however, entirely

congeneric with *Listrognathus tricolor* Tschek. as represented in the National Museum, and is presumably so with the genotype of *Listrognathus*. It should be noted that *albomaculatus* will not run to *Mesostenoideus* in Ashmead's key, because of its possession of the frontal horn.

(Mesostenoideus) **Listrognathus albomaculatus** (Cresson).

(Mesostenus) **Listrognathus leucocoxus** (Ashmead).

**Polyaenus spinarius** (Brullé) = *Mesostenus delawarensis* Dalla Torre = *Mesostenus albopictus* Cresson.

**Polistiphaga,** new genus.

Genotype.—**Mesostenus arvalis** Cresson.

Temples narrow and sharply sloping; eyes bulging; frons mutic; clypeus elevated, depressed at apex, in profile nose-shaped; antennae slender, filiform. Thorax moderately robust, opaque punctate or granular; dorsal anterior angles of pronotum tuberculate but without carinae; notauli sharply defined though not especially deep, prescutum not strongly gibbous; scutellum moderately convex, margined only at base; propodeum nearly completely areolated, only the areola incomplete laterally, its space more or less rugose longitudinally, apophyses strong, compressed, petiolar area deeply impressed, spiracles nearly circular; areolet small to very small, open at apex, recurrent near apex; nervulus antefurcal, nervellus broken below middle; legs slender, front basitarsus nearly as long as tibia. Abdomen moderately stout, very minutely and densely punctate opaque; first segment with ventral margin strongly decurved, postpetiole broad, spiracles at or near apical third; second tergite with minute pit-like gastrocoeli removed from base; ovipositor short, compressed, subsagittate at apex, sheath not or barely as long as first tergite.

In Ashmead's and Schmiedeknecht's keys of the tribe Mesostenini the genotype runs best to *Mesostenus* Gravenhorst. From this genus it is at once distinguished by the form and areolation of the propodeum, the form of the clypeus, etc. Except that the frontal horn is lacking it agrees much better with *Listrognathus* Tschek, especially in the form of the clypeus, wing venation, and shape of abdomen. Here again the propodeum distinguishes it, though less sharply than from *Mesostenus*.

The genotype and an undescribed species are parasitic in the nests of various species of *Polistes*.

(Meniscus) **Syzeuctus elegans** (Cresson).

(Meniscus) **Syzeuctus michiganensis** (Davis).

**Lissonota americana** (Cresson) = *Lampronota amphimelaena* Walsh = *Harrimaniella relativa* Viereck.

(Lampronota) **Lissonota angusta** (Davis).

(Lampronota) **Lissonota jocosa** (Cresson).

(Lampronota) **Lissonota punctata** (Cresson) ♀ = *Lampronota punctulata* Cresson ♀ and *Lampronota albifacies* Provancher ♂.

In his key to the species of *Lampronota* Cresson employed *punctata* and in the description of the species, *punctulata*; *punctata* has page precedence. Provancher's male species was synonymized by Provancher himself with *pleuralis* Cresson. It is, however, the male of the present species.

**Lissonota rufipes** (Cresson) ♂ = *Lissonota tegularis* (Cresson) ♂.

(Meniscus) **Asphragis mirabilis** (Cresson) = *Asphragis pulcherrimus* Ashmead, *Clistopyga pleuralis* Ashmead, *Meniscus ostentator* Davis.

(Pimpla) **Epiurus alboricta** (Cresson) ♂ = *Pimpla investigatrix* Walsh ♀.

**Tromatobia rufopectus** (Cresson) = *Pimpla defensator* Davis, *Pimpla landerensis* Viereck, *Pimpla scriptifrons* Cresson.

**Zaglyptus incompletus** (Cresson) ♀ = *Cylloceria lemoinei* Provancher.

(Pimpla) **Delomerista novita** (Cresson).

(Rhorus) **Spanotecnus bicolor** (Cresson).

(Catoglyptus) **Stiphrosomus fucatus** (Cresson).

(Mesoleptus) **Callidiotes albopleuralis** (Provancher) ♂ = *Atractodes nitens* Provancher ♀.

The above transfer and synonymy are based on homotypes of both species, that of *albopleuralis* by S. A. Rohwer and that of *nitens* by A. B. Gahan.

**Metacoelus mansuetor** (Gravenhorst) = *Hyperacmus tineae* Riley, *Hyperacmus ovatus* Davis.

The inclusion of *mansuetor* in *Metacoelus* rather than in *Polyclistus*, where it is placed by many of the European authorities, is based on Foerster's manuscript.

(Limneria) **Olesicampe argentifrons** (Cresson).

(Limneria) **Nemeritis ruficoxa** (Provancher).

(Limneria) **Angitia tibiator** (Cresson).

(Limneria) **Eulimneria valida** (Cresson).

(Limneria) **Dioctes salicicola** (Ashmead).

**Pristomerus fuscipennis** Cushman = *Pristomerus aciculatus* Ashmead MS.

Ashmead's name was published in Smith's Insects of New Jersey, (1899) 1900, p. 584. A specimen labelled "aciculatus Ashm. type" and others are those paratypes of **fuscipennis** recorded from Oswego, N. Y.

(Atractodes) **Leptopygus politus** (Ashmead).

(Orthocentrus) **Plectiscus carinatus** (Provancher).

This transfer is based on a homotype (Rohwer). On a misdetermination Davis placed the species in **Atmetus** Foerster.

## SCIENTIFIC NOTES AND NEWS

The name of the Land Classification Branch of the U. S. Geological Survey has been changed to the Conservation Branch, of which HERMAN STABLER is chief. The following divisions have been created: Mineral Leasing, J. B. TOUGH, chief; Mineral Classification, J. D. NORTHROP, chief; Homestead, A. E. ALDOUS, chief; Power, B. E. JONES, chief.

On July 1, the Division of Mineral Resources of the U. S. Geological Survey was transferred to the U. S. Bureau of Mines. F. J. KATZ, chief of the division, F. G. TRYON, B. L. JOHNSON and A. H. REDFIELD, geologists and mineral geographers, were transferred at the time.

F. L. HESS, geologist of the Geological Survey, has been appointed chief of the Division of Mineral Technology of the Bureau of Mines.

H. D. MISER, geologist of the Geological Survey, has been granted leave of absence to serve as state geologist of Tennessee for one year, effective September 1.